Remarks

Status of the Claims

Claims 1-54 were pending in the application. In the Office Action mailed February 26, 2006, claims 1-16 and 37-52 were rejected, and claims 17-36 and 53 were withdrawn from consideration as being directed to a non-elected species. By this paper, claims 1, 37, and 52 have been amended. New claims 54 and 55 have been added. For the reasons set forth below, Applicant submits that each of the pending claims is patentably distinct from the cited prior art and in condition for allowance. Reconsideration of the claims is therefore respectfully requested.

Double Patenting

Claims 1-16 and 37-52 were rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-5, 7, 10-11, 24-26, 28-30, 32, 35-36, and 49 of U.S. Patent No. 6,915,528 in view of Lemmons et al. (U.S. Patent No. 6,442,755). Enclosed herewith is a terminal disclaimer to obviate the double patenting rejection.

Claim Rejections

Claims 1-2, 4-8, 12-16, 37-38, 40-44, and 48-52 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Lemmons et al. ("Lemmons"). Claims 3, 9, 11, 39, 45, and 47 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lemmons and further in view of Shoff et al. ("Shoff"). Claims 10 and 46 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lemmons. As set forth below,

Applicant respectfully submits that each of the pending claims, as amended, is patentably distinct from the cited references, individually and collectively.

Claims 1, 37, and 52

Independent claims 1, 37, and 52 have been amended to recite that a PIO comprises:

> a ***single*** data structure that ***encapsulates*** one or more ***attributes*** and one or more user-selectable ***actions*** associated with the television program, the one or more ***attributes providing information about the television program***, the one or more user-selectable ***actions comprising program code*** executable by the entertainment system **in connection with the television program.**

Support for these amendments may be found in FIG. 5 and the accompanying text.

Thus, a PIO, as claimed, is a very specific data structure for representing a particular television program within an entertainment system. The claimed PIO not only includes attributes for providing information about the television program (*e.g.*, title, description, rating, running time), but also includes actions comprising program code, which is executable by the entertainment system in connection with the television program (*e.g.*, program code for causing the entertainment system to record the program).

Furthermore, the claimed actions and attributes are "encapsulated" within a single data structure, meaning that they are "encase[d] in or as if in a capsule" or that the PIO "form[s] a capsule or sheath around" the actions or attributes. See www.dictionary.com. Thus, merely finding examples of particular data or functions at different points in one or more references does not necessarily satisfy the limitation of those data and functions being "encapsulated" within a PIO. Although Applicant

believes that encapsulation is inherent in a program interface "object," Applicant added this term to aid the Examiner in understanding how the term is being used.

The Office Action appears to equate the claimed PIOs with Lemmons' "program guide display elements." Office Action at page 12. However, these display elements could not be more different from the claimed PIOs. First, they do not represent individual programs, but rather, relate to windows or components of the program guide. For instance, as depicted in FIG. 7A of Lemmons, display element 1 is shown as "Video," display element 2 is shown as "Text," and display element 3 is shown as "Program Listing Grid." These display elements are not the same as individual television programs. For instance, there is no suggestion of a PIO representing "Monday Night Football," as shown in FIG. 6 of the present application.

Second, the attributes described by Lemmons are attributes of a program guide, not attributes of a television program that provide "information about the television program," as claimed. Lemmons describes "font size, font type, color, screen coordinates, etc." as examples of attributes of his program guide display elements. Col. 2, lines 15-16. However, these typed of attributes do not provide "information about the television program." Rather, they define how a particular window or component is to be displayed on the screen.

While the Office Action does make reference to "program times, channels, titles, ... descriptions" and "web links" in Lemmons (col. 3, lines 20-40), they are never described as "attributes" of the program guide display elements. Rather, they are referred to as "television program listing data." In fact, Lemmons goes on to mention that the program guide data "may **also** [in addition to the program times, etc.] contain

markup language documents ... for updating the display screen layouts and functionality of a program guide without user intervention." Col. 3, lines 25- 30 (emphasis added). These markup language documents are what Lemmons uses to create the program guide display elements shown in FIG. 7A. Thus, the "program times, channels, titles, ... descriptions" and "web links" are clearly separate from the program guide display elements (or "PIOs" as interpreted by the Examiner), contrary to the limitations of claim 1, *i.e.*, they are not "encapsulated."

Third, the actions described by Lemmons are program guide actions, not actions to be performed in connection with individual television program. According to Lemmons:

> one action may be to replace a partial screen program listings grid (e.g., grid 150) with a full-screen program listings grid in response to a suitable user command. Another action may cause the grid to scroll, page, change its display (e.g., display listings by theme instead of channel, display listings in a list instead of in a grid), start a program search or action list, or perform any other suitable action in response to a suitable user command.

Col. 7, lines 56-63.

Finally, Lemmons' program guide display elements do not include actions comprising program code, as claimed. Lemmons merely states that:

> Control circuitry 42 may be configured to interpret the markup language documents and to generate program guide display screens for display on monitor 45. The program guide display screens may be generated with display elements at positions and with styles that are indicated by the markup language documents. In addition, ***actions*** assigned to display elements may be selected by control circuitry 42 to provide program guide functionality.

Col. 5, lines 33-41 (emphasis added). In other words, Lemmons provides a mechanism for assigning existing system functions to his display elements via the control circuitry 42. However, there is no teaching or suggestion of including program code in

Lemmons' program guide display elements. Indeed, such assignments would be most easily implemented through some kind of link (function call) between a display element and existing code stored elsewhere within Lemmons' system. A person of ordinary skill in the art would not assume that actual code would be included in the PIO absent hindsight reconstruction based on Applicant's own teachings.

Anticipation under 102 is proper only if the reference shows exactly what is claimed. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780 (Fed. Cir. 1985); MPEP § 2131. In the present case, it is clear that Lemmons does not show exactly what is being claimed. Indeed, Lemmons does not disclose a single data structure for representing a television program that encapsulates both attributes (conveying information about a television program) and actions (containing program code that is executable by the entertainment system in connection with the television program).

Accordingly, claims 1, 37, and 52 are believed to be patentably distinct. All other claims depend directly or indirectly from one of the foregoing claims and are therefore patentably distinct for at least the same reasons.

Claims 54 and 55

New claims 54 and 55 recite that:

> the program code is in a ***machine-independent format*** that is executable in a ***virtual machine*** within the entertainment device and ***any destination device to which the PIO is sent***, such that the ***program code does not need to be installed on the destination device*** prior to receiving the PIO in order to perform an associated user-selected action.

Support for this amendment may be found, for example, in pages 18-20 of the present application.

These claimed features allow a destination device to which a PIO is sent (*e.g.*, another set-top box) to execute the one or more actions associated with the PIO without requiring the program code to be pre-installed on the destination device. Furthermore, providing the program code in a machine-independent format allows PIOs to be shared between a variety of different devices, such as cellular phones, personal computers, and set-top boxes (STBs).

As an example, a user may transmit a PIO representing a television program from an STB to her cellular telephone. The PIO may include an action for displaying one or more of the attributes of the PIO, *e.g.*, the starting time of the television program. The cell phone does not need to have software installed for examining the PIO and outputting the requested information. Instead, the action, as represented by machine-independent code within the PIO, may be executable by a virtual machine within the cellular telephone to output the attribute information, either on the telephone's display screen or to the user's personal information manager (PIM).

The cited references do not disclose, individually or collectively, a PIO comprising program code "in a machine-independent format that is executable in a virtual machine within the entertainment device and any destination device to which the PIO is sent." Thus, none of the cited references can avoid having "the program code ... installed on the destination device prior to receiving the PIO in order to perform an associated user-selected action."

Conclusion

For at least the foregoing reasons, the cited prior art references, whether considered individually or in combination, fail to disclose each of the limitations in any of the pending independent claims. For at least the same reasons, each of the claims depending therefrom are also patentably distinct from the cited prior art. A Notice of Allowance is respectfully requested. The Examiner is encouraged to contact the undersigned at the telephone number provided below for a quick resolution of any remaining issues.

Respectfully submitted,

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